

July 15, 2021

Mayor David McFadden  
Village of Tuxedo Park  
80 Lorillard  
Tuxedo Park, NY 10987

Re: **Village of Tuxedo Park  
Proposal for Engineering Services  
Tuxedo Lake Water Main Replacement Design and Permitting Services**

Dear Mr. McFadden:

Weston & Sampson is pleased to present this proposal to the Village of Tuxedo Park (Village) for final design and permitting services for the Tuxedo Lake Water Main Replacement Project. The Tuxedo Lake Water Main is an 8-inch cast iron pipe that spans 1,700 LF on the bottom of Tuxedo Lake that was reportedly installed in 1933. The water main originates by the Water Treatment Plant and crosses the lake to the west, providing water service to the west side of the Village. While the exact original construction method of the pipe is unknown, pipes of that vintage that crossed water bodies were typically constructed with "River Crossing Pipe." River crossing pipe from the 1920's and 1930's was constructed with cast iron in 12-foot sections with ball and socket type joints. The joints were typically packed with lead, however pipe movement over time could potentially allow for leaking. The Village reports up to 60% water loss within their water distribution system by comparing the Water Treatment Plant output vs. the billed water meter readings. This 87-year-old pipe is suspected to a potential cause of much of the water loss within the system. In addition, this is one of two pipes that service the west side of the Village. Due to the small pipe diameter and reported tuberculation within the distribution system, it is understood that to provide water to the west side of the Village, the water system requires both feeds to be active.

Due to the critical nature of this pipe, Weston & Sampson was asked by the Village to provide Grant Application Support Services to apply for a Drinking Water State Revolving Fund (DWSRF) grant through the Environmental Facilities Corporation (EFC) for the replacement of the Tuxedo Lake Water Main, which could cover up to 60% of project costs for the Tuxedo Lake Water Main Replacement Project. The scope of this work included preparation of the following:

- EFC Grant Application Form
- Engineers Report
- Smart Growth Assessment Form
- SEQR Documentation
- SHPO Review Determination Letter
- Authorizing Resolution
- Preliminary 30% Design Plans

In consultation with the Village and the Orange County Department of Health (OCDOH), it has been decided that the least invasive and cost-effective approach would be to replace the existing pipe with a new High-Density Polyethylene (HDPE) pipe, laid at the floor of Tuxedo Lake, in a parallel alignment as the existing pipe. The HDPE pipe would be fusion welded, eliminating joints along the alignment and would have a service life of 100 years. Weston & Sampson has received conceptual approval for this approach by the Orange County Department of Health as long as the pipe is double walled and has blowoff, metering, and sampling stations on either side of the lake. A 10-inch SDR 11 HDPE pipe is selected for this project as its inside diameter is 8.6 inches. An 8-inch SDR 11 HDPE has an inside diameter of 6.9 inches which is less than the existing 8-inch cast iron pipe. The existing water main would remain in service while the new HDPE pipe is being installed. Since the OCDOH is requiring the pipe to be double walled, a flexible hose liner will be installed within the HDPE pipe. Once the HDPE pipe has been installed, the existing water main would be either disconnected or abandoned in place.

Due to COVID-19, grant opportunities had been temporarily suspended by the EFC but we understand they are being replenished with American Rescue Plan Act (ARPA) funds so grants will likely be available later this year.

Since this water main is a critical piece of infrastructure and is beyond its useful service life, in a proactive approach to address a key piece critical infrastructure, not only for lost revenue due to water loss, but for maintaining proper and safe system operation for years to come, the Village has requested that Weston & Sampson provide this proposal to complete the design of the water main and assist in obtaining the necessary permits so that the replacement can be conducted if the pipe fails or when funds are available for this work, whether through grants, loans, or self-funding.

The anticipated tasks and steps necessary to complete this work are described in the Scope of Services below.

**SCOPE OF SERVICES:**

Upon written authorization to proceed, Weston & Sampson will immediately begin work which will include the following tasks.

**Task 1: Final Design:** Weston & Sampson proposes to provide the following design services for the Tuxedo Lake Water Main. We propose the following tasks:

- Develop construction plans, profiles, details, and cross sections as necessary to accurately represent to the contractor the work to be performed.
- Develop technical specifications for the required work.
- Develop “front end” contract documents including such things as the Advertisement for Bid, Agreement, General and Special Conditions, Bid and Bid Bond Forms also conforming to CSI format.
- Attend one design review meeting with the Village at 60 percent completion of design.
- Develop a construction cost estimate for the work.

Final submittal will include final construction plans and details, final technical specifications, and a front-end contract document conforming to EFC standards if the Village were to pursue EFC financing or grants, along with the final construction cost estimate. This task is proposed to be invoiced on a lump sum, percent complete basis as work progresses.

**Task 2: Permitting:** Weston & Sampson will assist the Village is obtaining OCDOH and New York State Department of Environmental Conservation (NYSDEC) permits. All permit application fees shall be paid directly by the Village and are not included in the budget proposed herein. Weston & Sampson contacted the New York State Department of Environmental Conservation (NYSDEC) regarding permit requirements pertaining to the project and completed a permit jurisdiction review form. In response to the permit jurisdiction review, the NYSDEC cited the following potential permits. Based on the scope of the project, Weston & Sampson will provide the following anticipated permitting services.

**OCDOH:** Weston & Sampson shall submit design plans, technical specifications, engineer’s report, and permit application to OCDOH with assistance from the Village. Our budget for this work presumes receipt of a single round of comments from OCDOH prior to approval.

**NYSDEC Protection of Waters:** The Tuxedo Lake is a Class AA(T), waterbody with a Status of Protected, Navigable, and a DEC Water Index Number of NJ 12-15-P1007. A Protection of Waters permit is required to physically disturb the bed or banks (up to 50 feet from stream) of any streams identified as “protected.” A Protection of Waters permit is required for any excavation or filling below the mean high-water line of any waterbodies and contiguous wetlands identified above as “navigable.”

In addition, a time restriction may be required for protection of cold-water trout fisheries (waters classified under Article 15 of the Environmental Conservation Law (ECL) with a “T” or “TS” designation), beginning October 1 and ending April 30.

The design documents will include provisions for the Contractor to ensure that work shall not pollute any stream or waterbody. The Contactor shall be required to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

Weston & Sampson will assist the Village in preparing a Protection of Waters Permit Application for this project. Our budget for this work presumes receipt of a single round of comments from NYSDEC prior to approval.

**NYSDEC Freshwater Wetlands:** The NYSDEC has determined that the project site is not within a New York State protected Freshwater Wetland therefore we have not included this permit within our scope of services.

**Army Corps. of Engineers – Nation Wide Permit (NWP):** Based on anticipated scope of work, this project should fall under the NWP 3 for maintenance. Under this NWP, this covers repair, rehabilitation or replacement of any previously authorized, currently serviceable structure or fill. The permit also authorizes minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement. This would be the case for the Tuxedo Lake Water Main as we are replacing the existing water main with a different material as recommended by the OCDOH. Since this project would be covered by the NWP 3, a separate permit would not be needed. For this activity, a pre-construction notification would not be required to be submitted to the local district engineer. Therefore, we have not included this permit within our scope of services. If additional or new permits Army Corps. permits are necessary, we reserve the right to request a contract amendment commensurate with the level of effort required to complete the required permitting services.

**NYSDEC State Listed Species:** The NYSDEC has reviewed the State's Natural Heritage records and has determined that the site is located within or near records of the following state-listed species:

<u>Name</u>	<u>Status</u>
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Threatened
Northern long-eared bat ( <i>Myotis septentrionalis</i> )	Threatened
Timber rattlesnake ( <i>Crotalus horridus</i> )	Threatened

Any potential impacts of the proposed project on these species should be fully evaluated during the review of the project pursuant to the State Environmental Quality Review Act (SEQR). A permit is required for the incidental taking of any species identified as "endangered" or "threatened," which can include the removal of habitat. In addition, project modifications may be needed to avoid or adequately mitigate any potential impacts identified.

**Bald eagle:** Bald eagle nests have been documented in close proximity to the project location. Impacts to this species should be assessed following the National Bald Eagle Management Guidelines.

If project related impacts cannot be fully avoided or minimized, a permit for incidental take may be needed. The acceptable work window that would not result in any impacts to breeding eagles would be October 1<sup>st</sup> to December 31<sup>st</sup>. For work proposed outside of this window, additional information is needed, including when construction activities are proposed to take place, what equipment would be used, and noise levels from construction and operational activities as compared to ambient noise levels.

**Northern long-eared bat:** To avoid adverse impacts to northern long-eared bats and the need for an Incidental Take Permit pursuant to 6 NYCRR Part 182, all tree removal must take place from November 1<sup>st</sup> to March 31<sup>st</sup>. If the project sponsor cannot complete tree clearing within this time of year restriction, then the Department will require further review on the impacts to this species. Additional project modifications may be needed to avoid or adequately mitigate any potential impacts identified.

**Timber rattlesnake:** The project location is within the screening distance of a known timber rattlesnake record. Impacts to the species and potential suitable habitat should be assessed following the Timber Rattlesnake Guidelines Document. At a minimum, conservation measures and take-avoidance measures will be needed during construction and operation of this project. These could include seasonal

restrictions, a timber rattlesnake monitor, temporary barriers as appropriate based on project details, and the development of an Education and Encounter Plan for all contractors and workers. Additional information may be needed to determine if suitable habitat for this species will be impacted. If project related impacts cannot be fully avoided or minimized, an Incidental Taking permit pursuant to Article 11, Title 5, Endangered and Threatened Species may be required.

Please note that a project sponsor may not commence site preparation, including tree clearing, until the provisions of SEQR are complied with and all necessary permits are issued for the proposed project.

The absence of data does not necessarily mean that other rare or state-listed species, natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, NYSDEC files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. The NYSDEC cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

It is our opinion that the species mentioned will not be impacted by the scope of this project. Therefore, we have allocated time to meet with the NYSDEC to discuss the project with the intention of demonstrating that the aforementioned wildlife will not be impacted. We do not anticipate that the following will be necessary for this work:

- NYSDEC State Listed Species permit
- Species specific studies/analysis
- Additional permits (incidental takings)
- Mitigation design/measures as required by permit conditions

If additional or new permits are necessary, we reserve the right to request a contract amendment commensurate with the level of effort required to complete the required permitting services.

**Stormwater Pollution Prevention Plan (SWPPP):** Since this is a linear utility project and it is not anticipated to disturb one or more acres of land, we do not anticipate that a SWPPP will be necessary. Our plans, however, will include the necessary Erosion and Sedimentation controls required under the General Permit for Stormwater Discharge from Construction Activity (GP-0-20-001).

**Other:** Other permits from the NYSDEC or other agencies may be required for projects conducted on this property now or in the future, as noted by the NYSDEC during their permit jurisdiction review. Also, regulations applicable to the location subject to this determination occasionally are revised and the project sponsor should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year. We have not included scope for additional permits, however, if additional or new permits are necessary, we reserve the right to request a contract amendment commensurate with the level of effort required to complete the required permitting services.

**SEQR:** As replace-in-kind project, it is our opinion that this project is a SEQR Type II Action based on our experience with prior projects. We will provide the Village with draft resolution language to support its declaration of this project as a Type II action. The Village shall consult with its attorney for confirmation that the project meets the legal definition of a Type II action.

## **ASSUMPTIONS**

Weston & Sampson has based this scope of services on the following understanding and assumptions:

- We do not anticipate the need for permanent construction easements as the current pipe alignments are within the Village rights-of-way. Furthermore, if temporary construction easements are required, the Village will address this separately and as such our work will not include any services related to easement delineation or acquisition, unless requested by the Village.

- The Village’s GIS mapping and bathometric survey shall be sufficient for development of base mapping of the project. If the water main configurations are different than shown on the plans, the Village will provide the necessary markups to update the plans to reflect existing conditions.
- Field mark-outs and survey by the Engineer is not required.
- Soil borings are not necessary at the connection locations on either side of the lake.
- The design approach of installing a double walled pipe on the floor of the lake will be acceptable to the OCDOH. Other design approaches will require a contract amendment.
- A temporary water system design is not required for this design approach.

Based on the unknown implementation and construction schedule of the project, we will provide a separate scope of services for bidding and construction phase services if and when requested by the Village.

**FEE SCHEDULE:**

The proposed fees below include all labor, equipment, materials, and expenses required to complete the scope of work as outlined above. Our proposed fees are summarized in the table below.

Project Task	Total Fee
Task 1: Final Design (Lump Sum)	\$24,000
Task 2: Permitting (Lump Sum)	\$9,300
<b>TOTAL FEE</b>	<b>\$33,300</b>

**PAYMENT**

Weston & Sampson understands the following:

- Project compensation will be invoiced on the basis of percent completion for lump sum tasks.
- All expenses, including travel, communication, and reproduction costs are included in the estimated fees provided above.

**PERFORMANCE SCHEDULE:**

Weston & Sampson is prepared to proceed with work immediately upon execution of an agreement and receipt of written notice to proceed.

Sincerely,

**WESTON & SAMPSON, PE, LS, LA, PC**



Joseph M. Zongol, PE  
Associate/Team Leader

ACCEPTED FOR:  
**Village of Tuxedo Park**

By: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_